

### **Amendments To The Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

### **Listing of Claims**

Claim 1. (Currently Amended) A process for producing a thin film of an I-III-VI<sub>2</sub>, compound of an element from each of Groups IB and IIIB of the Periodic Table with two atoms of a Group VIB element, comprising:

~~a first step of (i)~~ forming a thin film of an III-VI compound on a substrate by Metal Organic Chemical Vapor Deposition ~~using~~ employing a single precursor ~~including~~ containing elements of Groups III and VI;

~~a second step of (ii)~~ forming a thin film of an I<sub>2</sub>-VI compound on the thin film of the III-VI compound by Metal Organic Chemical Vapor Deposition ~~using~~ employing a precursor ~~including metals~~ containing at least one metal of Group I, thereby forming a compound of the elements from Groups I, III and VI which is symbolized by the formula: I-III-VI<sub>2</sub>; and

~~a third step of (iii)~~ forming a thin film of the I-III-VI<sub>2</sub> compound on the thin film of the I<sub>2</sub>-VI compound by Metal Organic Chemical Vapor Deposition ~~using~~ employing a single precursor ~~including~~ containing elements of Groups III and VI.

Claim 2. (Currently Amended) The process as set forth in claim 1, further comprising:

~~a fourth step of (iv)~~ forming a thin film of an I-III-VI<sub>2</sub> compound on the thin film of the I-III-VI<sub>2</sub> compound formed in the third step by Metal Organic Chemical Vapor Deposition ~~using~~ employing a single precursor ~~including~~ containing elements of Groups III

and VI, and wherein elements of Group III ~~used~~ employed in ~~(iv)~~ the fourth step are different from those ~~used~~ employed in ~~the first and third~~ steps (i) and (iii).

Claim 3. (Currently Amended) The process as set forth in claim 1, further comprising:

~~a fourth step of (iv)~~ forming a thin film of an I-III-VI<sub>2</sub> compound on the thin film of the I-III-VI<sub>2</sub> compound formed in the third step by Metal Organic Chemical Vapor Deposition ~~using~~ employing a single precursor ~~including~~ containing elements of Groups III and VI, and wherein elements of Group VI ~~used~~ employed in ~~(iv)~~ the fourth step are different from those ~~used~~ employed in ~~the first and third~~ steps (i) and (iii).

Claim 4. (Currently Amended) The process as set forth in any one of claims 1 through 3, wherein the precursors ~~used in the first and third~~ of steps (i) and (ii) are [Me<sub>2</sub>In-(μSeMe)]<sub>2</sub>.

Claim 5. (Currently Amended) The process as set forth in any one of claims 1 through 3, wherein the precursor ~~used~~ employed in ~~the second~~ step (ii) is (hfac)Cu(DMB).

Claim 6. (Currently Amended) The process as set forth in claim 2, wherein the ~~fourth~~ precursor of step (iv) is [Me<sub>2</sub>Ga-(μSeMe)]<sub>2</sub>.

Claim 7. (Currently Amended) The process as set forth in claim 2, wherein the thin film of ~~an I-III-VI<sub>2</sub>~~ a compound symbolized by the formula: Group I-Group III-Group VI<sub>2</sub> is selected from the group consisting of  $\text{CuIn}_{1-x}\text{Ga}_x\text{Se}_2$ ,  $\text{CuIn}_{1-x}\text{Al}_x\text{Se}_2$ ,  $\text{CuGa}_{1-x}\text{Al}_x\text{Se}_2$ ,  $\text{AgIn}_{1-x}\text{Ga}_x\text{Se}_2$ ,  $\text{AgIn}_{1-x}\text{Al}_x\text{Se}_2$  and  $\text{AgIn}_{1-x}\text{Ga}_x\text{Se}_2$ .

Claim 8. (Original) The process as set forth in claim 3, wherein the thin film of an I-III-VI<sub>2</sub> compound is selected from the group consisting of  $\text{CuIn}(\text{Se},\text{S})_2$ ,  $\text{CuGa}(\text{Se},\text{S})_2$ ,  $\text{AgIn}(\text{Se},\text{S})_2$ ,  $\text{AgGa}(\text{Se},\text{S})_2$ ,  $\text{CuIn}(\text{Se},\text{Te})_2$ ,  $\text{CuGa}(\text{Se},\text{Te})_2$ ,  $\text{AgIn}(\text{Se},\text{Te})_2$ ,  $\text{AgGa}(\text{Se},\text{Te})_2$ ,  $\text{CuIn}(\text{S},\text{Te})_2$ ,  $\text{CuGa}(\text{S},\text{Te})_2$ ,  $\text{AgIn}(\text{S},\text{Te})_2$  and  $\text{AgGa}(\text{S},\text{Te})_2$ .

Claim 9. (Currently Amended) A process for producing an absorption layer for a solar cell, comprising ~~the steps of:~~

forming ~~an InSe~~ a thin film of InSe on a substrate by Metal Organic Chemical Vapor Deposition ~~using~~ employing a single precursor ~~including~~ containing In and Se;

forming a ~~Cu<sub>2</sub>Se~~ thin film of Cu<sub>2</sub>Se on the InSe thin film by Metal Organic Chemical Vapor Deposition ~~using~~ employing a Cu precursor; and

forming a ~~CuInSe<sub>2</sub>~~ thin film of CuInSe<sub>2</sub> on the Cu<sub>2</sub>Se thin film by Metal Organic Chemical Vapor Deposition ~~using~~ employing a single precursor ~~including~~ containing In and Se.

Claim 10. (Currently Amended) The process as set forth in claim 9, further comprising ~~the step of:~~

forming a ~~CuIn<sub>1-x</sub>Ga<sub>x</sub>Se<sub>2</sub>~~ thin film of CuIn<sub>1-x</sub>Ga<sub>x</sub>Se<sub>2</sub> on the ~~CuInSe<sub>2</sub>~~ thin film of

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CuInSe<sub>2</sub> by Metal Organic Chemical Vapor Deposition ~~using~~ employing a single precursor  
~~including~~ containing Ga and Se.